

(1) Each oil strainer or filter that has a bypass must be constructed and installed so that oil will flow at the normal rate through the rest of the system with the strainer or filter completely blocked.

(2) The oil strainer or filter must have the capacity (with respect to operating limitations established for the engine) to ensure that engine oil system functioning is not impaired when the oil is contaminated to a degree (with respect to particle size and density) that is greater than that established for the engine under Part 33 of this chapter.

(3) The oil strainer or filter, unless it is installed at an oil tank outlet, must incorporate an indicator that will indicate contamination before it reaches the capacity established in accordance with paragraph (a)(2) of this section.

(4) The bypass of a strainer or filter must be constructed and installed so that the release of collected contaminants is minimized by appropriate location of the bypass to ensure that collected contaminants are not in the bypass flow path.

(5) An oil strainer or filter that has no bypass, except one that is installed at an oil tank outlet, must have a means to connect it to the warning system required in § 25.1305(c)(7).

(b) Each oil strainer or filter in a powerplant installation using reciprocating engines must be constructed and installed so that oil will flow at the normal rate through the rest of the system with the strainer or filter element completely blocked.

[Amdt. 25-36, 39 FR 35461, Oct. 1, 1974, as amended by Amdt. 25-57, 49 FR 6848, Feb. 23, 1984]

§ 25.1021 Oil system drains.

A drain (or drains) must be provided to allow safe drainage of the oil system. Each drain must—

- (a) Be accessible; and
- (b) Have manual or automatic means for positive locking in the closed position.

[Amdt. 25-57, 49 FR 6848, Feb. 23, 1984]

§ 25.1023 Oil radiators.

(a) Each oil radiator must be able to withstand, without failure, any vibra-

tion, inertia, and oil pressure load to which it would be subjected in operation.

(b) Each oil radiator air duct must be located so that, in case of fire, flames coming from normal openings of the engine nacelle cannot impinge directly upon the radiator.

§ 25.1025 Oil valves.

(a) Each oil shutoff must meet the requirements of § 25.1189.

(b) The closing of oil shutoff means may not prevent propeller feathering.

(c) Each oil valve must have positive stops or suitable index provisions in the “on” and “off” positions and must be supported so that no loads resulting from its operation or from accelerated flight conditions are transmitted to the lines attached to the valve.

§ 25.1027 Propeller feathering system.

(a) If the propeller feathering system depends on engine oil, there must be means to trap an amount of oil in the tank if the supply becomes depleted due to failure of any part of the lubricating system other than the tank itself.

(b) The amount of trapped oil must be enough to accomplish the feathering operation and must be available only to the feathering pump.

(c) The ability of the system to accomplish feathering with the trapped oil must be shown. This may be done on the ground using an auxiliary source of oil for lubricating the engine during operation.

(d) Provision must be made to prevent sludge or other foreign matter from affecting the safe operation of the propeller feathering system.

[Doc. No. 5066, 29 FR 18291, Dec. 24, 1964, as amended by Amdt. 25-38, 41 FR 55467, Dec. 20, 1976]

COOLING

§ 25.1041 General.

The powerplant and auxiliary power unit cooling provisions must be able to maintain the temperatures of powerplant components, engine fluids, and auxiliary power unit components and fluids within the temperature limits established for these components and fluids, under ground, water, and flight